



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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Seattle, Washington 98101-3140

MAY 22 2013

OFFICE OF
COMPLIANCE AND ENFORCEMENT

Reply to: OCE-084

Michael L. Verhaar
Environmental Affairs Manager
737 Airplane Program
M/C 63-74
P.O. Box 3703
Seattle, Washington 98124-2207

Re: Risk-based Disposal Approval for the Duwamish Sediment Other Area and Southwest Bank Corrective Measure and Habitat Project Boeing Plant 2, South Shoreline Work Elements, Seattle, Washington
TSCA ID No. WAD 00925 6819

Dear Mr. Verhaar:

This letter constitutes approval under the authority of 40 Code of Federal Regulations (C.F.R.) § 761.61(c) for the cleanup and associated verification sampling and analysis of certain polychlorinated biphenyl (PCB) remediation waste at The Boeing Company (Boeing) Plant 2 facility in Seattle, Washington. More specifically, this approval authorizes Boeing, with respect to the requirements for cleanup and disposal of PCB remediation waste at 40 C.F.R. § 761.61(c), to cleanup approximately 35,000 cubic yards of sediments, soils, structures and debris from the shoreline and adjacent sediments in front of Plant 2, and to perform verification sampling, backfilling and post-backfilling monitoring following removal of contaminated material. This letter also documents EPA's evaluation of those project elements which will be conducted under requirements of 40 C.F.R. § 761.61 other than § 761.61(c). This approval and EPA's evaluation of the project under the Toxic Substance Control Act (TSCA) is wholly contingent upon EPA written approval of all phases and aspects of the project pursuant to the Resource Conservation and Recovery Act (RCRA) corrective action Administrative Order on Consent, EPA Docket No. 1092-01-22-3008(h) (Boeing Order, Reference 4).

This approval is the second in a series of related approvals that provide authorization for work under the Boeing Order subject to the requirements of TSCA, the first of which was issued December 20, 2012 (Reference 2) based on Boeing's original application (Reference 1). A third application and approval is anticipated to provide approval pursuant to TSCA for cleanup and disposal of remaining sediments during subsequent construction seasons.

This approval is issued to Boeing, the owner and operator of the Plant 2 facility, who has overall responsibility for implementation of this authorized work. This project will involve transfer of contaminated sediments, soils and debris from the point of excavation to on-site temporary storage piles, loading these materials into intermodal containers, and off-site disposal at facilities other than those owned or operated by Boeing. This approval is not issued to any of the owners

or operators of these off-site facilities. The approval does, however, include consideration of how PCB remediation waste subject to this approval will be transported, and disposed of to ensure that work subject to this approval satisfies the standard of no unreasonable risk of injury to health or the environment at 40 C.F.R. § 761.61(c)(2).

This written decision for a risk-based method for cleanup, storage, and disposal of PCB remediation waste is based on Boeing's application for a risk-based disposal approval (RBDA) consisting of the documentation identified in Enclosure 1. All sections of the RBDA application, including those referenced in this approval, are incorporated by reference. In granting this approval, EPA finds that the proposed cleanup and verification of PCB remediation waste, subject to the conditions below, will not pose an unreasonable risk of injury to health or the environment. Boeing shall ensure that activities conducted pursuant to this approval are in full compliance with conditions of the approval. The conditions of this approval are enforceable under TSCA and implementing regulations at 40 C.F.R. § 761.61(c). Any actions by Boeing which violate the terms and conditions of this approval may result in administrative, civil judicial, or criminal enforcement by EPA in accordance with Section 16 of TSCA, 15 USC § 2615.

Conditions

1. Boeing is authorized to perform cleanup of PCB remediation waste, associated verification sampling, backfilling and post-backfilling monitoring as documented in Boeing's RBDA application (Reference 3¹) pursuant to the specific provisions of 40 C.F.R. § 761.61 documented in Enclosure 2 to this approval, and as approved by EPA under the Boeing Order (Reference 4) that are associated with the South Shoreline Work Element. (See Figure 1 in the RBDA application). Soil and sediment excavation and structure/debris removal subject to this approval must be completed by December 31, 2013, with shipment for off-site disposal of PCB remediation waste subject to this approval to be complete by a target date of 60 days following completion of excavation activities.
2. Within 60 days following completion of cleanup work subject to this approval, or at such other time as agreed to by EPA, Boeing will provide EPA with a summary report of activities completed pursuant to this approval, and documentation of issues or problems that were encountered.
3. This approval will remain in effect for the duration of the Boeing Order (Reference 4) with respect to work requirements subject to the requirements of 40 C.F.R. § 761.61. Following completion of such work under the Boeing Order, including post-backfilling monitoring, Boeing may provide a written request to EPA to terminate this approval.
4. Boeing is authorized to construct temporary stockpile structures and to store for disposal contaminated soils and sediments as documented in "South Shoreline Stockpile Management Plan" (Reference 5). Boeing will ensure that best management practices are used for gravity dewatering within these stockpiles for purposes of minimizing the quantity of residual liquids

¹ All references are to those in Enclosure 1.

remaining in the solids, consistent with project schedules, equipment limitations, and the properties of the excavated soils/sediments. Boeing will establish and maintain records as provided for in 40 C.F.R. §761.180.

5. Boeing is authorized to add absorbents to excavated soils and sediments within the stockpiles authorized by Condition 4 for purposes of absorbing residual free liquids remaining in excavated soils and sediments. Sufficient absorbent material will be added and appropriately mixed, as needed, to eliminate visible free liquids before removal from the stockpile enclosures. Boeing is not authorized to add absorbents to any other aqueous PCB remediation waste associated with this project, such as vehicle or container wash water, storm water collected from areas outside of the stockpile enclosures which may have been in contact with contaminated soils or sediments, or final decontamination water from the facility generated pursuant to Condition 8 of this Approval.
6. All aqueous PCB remediation waste generated as part of this project other than residual free liquids in excavated shoreline soils or sediments must be managed according to one of the following options:
 - Collected on-site and shipped via Department of Transportation-compliant containers or tank trucks to an off-site facility for decontamination as required and discharge pursuant to 40 C.F.R. § 761.79(b)(1)(ii) or (iii);
 - Collected, and decontaminated (pre-treated) on-site as required and discharged pursuant to 40 C.F.R. § 761.79(b)(1)(ii) or (iii) to the King County Publically Owned Treatment Works. If this option is selected, Boeing must provide EPA with a copy of King County's pretreatment permit that demonstrates the permit contains an enforceable limit for PCBs, prior to any discharge to the King County publically owned treatment works (POTW);
 - Collected on-site and managed by the on-site dredge return water treatment system for further treatment before discharge to the Waterway under the USACE Section 10/104 Permit.

Boeing will ensure that any decontamination of aqueous PCB remediation waste on-site at the facility will be conducted in compliance with the requirements of 40 C.F.R. 761.79(e)-(g).

Any sampling and analysis pursuant to this condition that is not otherwise subject to a written sampling and analysis plan approved by EPA under the Boeing Order, King County under authority applicable to authorization for discharge to the King County POTW, or the USACE Section 10/104 Permit, must be conducted under a written sampling and analysis plan, and a project-specific quality assurance project plan that data will be of acceptable quantity and quality for their intended decision-making uses. Boeing will make such plans available to EPA no later than ten (10) business days prior to any sampling or analysis under the plan, or such other time as EPA may agree to.

7. Boeing will ensure that all trucks or intermodal containers, used to transport PCB remediation waste under this approval or as otherwise authorized pursuant to 40 C.F.R. § 761.61 will have adequate liners, or are otherwise sufficiently watertight, to prevent any incidental liquids from leaking from the boxes or containers during transport.
8. All equipment and structures that have been in contact with liquid or non-liquid PCB remediation waste subject to this approval must be disposed of or decontaminated following completion of work under this approval. All disposable equipment or materials must be disposed of in a facility permitted, licensed or registered by a State to manage municipal solid waste subject to 40 C.F.R. Part 258, or municipal non-hazardous waste subject to 40 C.F.R. §§ 257.5 through 257.30, as applicable. Non-disposable equipment and structures must be decontaminated using mechanical means or pressure washing to achieve a “clean debris surface” as defined in 40 C.F.R. § 268.45, Table 1, footnote 3. Water generated from decontamination activities must be managed according to one of the options enumerated in Condition 6 above. Water generated from pressure washing of intermodal containers which may be received at the Roosevelt Regional Landfill that have come into direct contact with PCB remediation waste may be disposed of in the landfill leachate management system described in Reference 12, provided that gross PCB remediation waste is first removed from containers by ordinary mechanical means (shovels, brooms, etc.) to minimize the quantity of solids introduced into the leachate management system.

Boeing will ensure that any decontamination conducted pursuant to this condition will be conducted in compliance with the requirements of 40 C.F.R. 761.79(e)-(g).

9. Boeing is authorized to dispose of bulk PCB remediation waste with PCB concentrations < 50 ppm in a facility permitted, licensed or registered by a State to manage municipal solid waste subject to 40 C.F.R. Part 258, or municipal non-hazardous waste subject to 40 C.F.R. §§ 257.5 through 257.30, as applicable².
10. Boeing is authorized to dispose of bulk PCB remediation waste with PCB concentrations ≥ 50 ppm in a hazardous waste landfill permitted by a State authorized under § 3006 of RCRA.
11. Prior to rail or truck shipment of any PCB remediation with total PCB concentrations less than 50 ppm for disposal as alternate daily cover at a landfill authorized to receive such material pursuant to Condition 9, Boeing will provide to EPA a copy of the approval or other documentation provided to the receiving landfill by the applicable jurisdiction (jurisdictional

² On April 9, 2013, Boeing provided a notice of self-implementing cleanup pursuant to 40 C.F.R. §761.61(a) for purposes of establishing a disposal pathway for concrete PCB remediation waste with as-found total PCB concentrations < 50 ppm. EPA recommended that Boeing provide this notification to accommodate an early start to construction activities for South Shoreline Work Elements in advance of this risk-based disposal approval being finalized. EPA understands that Boeing will complete disposal of concrete PCB remediation waste for which waste disposal profiles and arrangements with the receiving disposal facility are already in place. Although this circumstance results in overlapping authorization between the notice of self-implementing cleanup and this approval, EPA does not object in the interests of avoiding disruption and additional paperwork applicable to concrete PCB remediation waste disposal.

health department or state agency) to accept and dispose of PCB remediation waste as alternate daily cover.

If such approval or documentation establishes a demonstration or evaluation period associated with disposal of PCB remediation waste as alternate daily cover, Boeing will provide a copy of any communication related to this demonstration period to EPA pursuant to Condition 18 during the demonstration period, as well as any evaluation or disposition of the demonstration (e.g., termination or extension of the demonstration approval, or issuance of any final approval for acceptance of PCB remediation waste for disposal as alternate daily cover).

If alternate daily cover is reasonably expected to remain stockpiled at the receiving landfill for more than 30 days, Boeing will provide written documentation to EPA that appropriate controls are in place to address potential wind dispersal of stockpiled alternate daily cover, and that appropriate run-off controls are in place. Acceptable documentation includes, but is not limited to, a landfill operating plan and associated appendices covering storm water management and fugitive dust control.

12. Boeing will ensure that a copy of this approval is provided to members of its field engineering team (AMEC Environment and Infrastructure, Inc. and its sub-consultants, Envirocon, Inc., and its subcontractors, Waste Management, Inc., and Regional Disposal Company) (Field Team) responsible for conducting work subject to requirements of the approval. Boeing will ensure that any contracts it issues to members of the Field Team and any associated contract directions are consistent with the requirements of this approval. Boeing is responsible for ensuring compliance with this TSCA Risk Based Disposal Approval.
13. Boeing will ensure that all field work associated with this project conducted by Boeing or its Field Team is conducted under written site-specific health and safety plans. Boeing will ensure that these plans document appropriate training and personal protective equipment required for all personnel that may be exposed to PCBs during work associated with this project. Boeing will make available copies of such plans to EPA upon request.
14. Nothing in this approval relieves Boeing of any obligation to comply with the Boeing Order, any other EPA or Ecology administrative action, or any statutory requirements, or rules or regulations applicable to the activities subject to this approval.
15. Within seven (7) days following the effective date of this approval, Boeing will provide EPA with written or e-mail notice of its project manager responsible for overall implementation of work subject to this approval. The initial EPA TSCA project manager is identified in Condition 18. The respective project managers will be responsible for timely and routine communication regarding implementation of this approval, including notification pursuant to Condition 16. For matters otherwise reportable to the EPA RCRA project manager under the Boeing Order, concurrent notification via e-mail is acceptable and encouraged.

16. If at any time before, during, or after conduct of activities subject to this approval, Boeing possesses or is otherwise made aware of any data or information (including but not limited to site conditions that differ from those presented in the application) that activities approved herein may pose an unreasonable risk of injury to health or the environment, Boeing must report such data or information via facsimile or e-mail to EPA within five working days at the project manager level, and in writing to the Regional Administrator within 30 calendar days of first possessing or becoming aware of such data or information. At his or her sole discretion, the EPA project manager may waive the written reporting requirement for those issues that are determined to be minor, or can be timely resolved without modification of this Approval. Boeing shall also report in the same manner, new or different information related to a condition or any element of the approved activities if the information is relevant to this approval. EPA may direct Boeing to take such actions it finds necessary to ensure the approved storage activities do not pose an unreasonable risk of injury to health or the environment. Boeing shall follow such direction until written approval is obtained from the EPA that finds the condition(s) requiring such direction no longer poses an unreasonable risk of injury to health or the environment.
17. EPA reserves the right to modify or revoke this approval based on information provided pursuant to Condition 16, or any other information available to EPA that provides a basis to conclude that activities covered by this approval pose an unreasonable risk of injury to health or the environment. Boeing may request modification of this approval by providing a written request to EPA. If the EPA agrees with a request for modification, the EPA will provide written approval to Boeing. Prior to obtaining written approval of a modification request, Boeing shall comply with the existing approval conditions.
18. Submissions required by this approval shall be provided to EPA as follows:

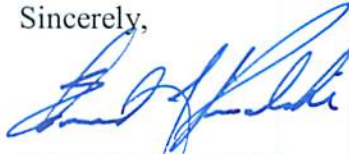
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With copies to the EPA Project Manager:

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Should you have any questions or comments, please contact Dave Bartus at (206) 553-2804, or Bartus.dave@epa.gov.

Sincerely,



Edward J. Kowalski
Director

Enclosures

1. References
2. Statement of Basis

cc: Will Ernst
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